

Amendments to the Specification:

Please replace the paragraphs beginning at page 14, lines 1-21, with the following amended paragraphs:

R_1 = H, a cation (e.g., Na^+ , K^+ , NH_4^+) or a C1-C5 (i.e., a one, two, three, four or five carbon) substituted or unsubstituted carbon chain (e.g., a straight chain), wherein the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, epoxy and a substituted or unsubstituted C1-C2 (i.e., a one or two carbon) carbon chain; and

R_2 = a C15-C19 (i.e., a 15, 16, 17, 18, or 19 carbon) substituted or unsubstituted carbon chain (e.g., a straight chain) having a *cis* or *trans* double bond between the 9th and 10th carbons counting from the carbonyl carbon (C=O) and either: (i) a triple bond between the 12th and 13th carbons counting from the carbonyl (C=O) carbon or (ii) either a single or double bond between the 12th and 13th carbons and at least one substituant substituent at one or both of the 12th and 13th carbons, wherein the substituants substituents are selected from the group consisting of hydroxy, oxo, halogen, amino, cyano, azido, cyclopropane, cyclopropene, epoxy and a substituted or unsubstituted C1-C2 carbon chain. The substituents can be polar groups and/or hydrogen bond acceptors. The composition can further comprise an aqueous surfactant (or a combination of aqueous surfactants), and inhibitor of oxidation (or a combination of such inhibitors), or a permeation enhancer (or combination of permeation enhancers). The composition can also include: an aqueous surfactant and a permeation enhancer; an aqueous surfactant and an inhibitor of oxidation; or an aqueous surfactant, a permeation enhancer, and an inhibitor of oxidation.

Please replace the paragraph beginning at page 14, line 25 thru page 15, line 22, with the following amended paragraphs:

In various embodiments: R_1 is H or a cation; R_1 is a C1-C5 substituted or unsubstituted carbon chain, wherein the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, epoxy and a substituted or unsubstituted C1-C2

carbon chain; R₁ is a C1-C5 substituted or unsubstituted carbon chain, wherein the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, epoxy and an unsubstituted C1-C2 carbon chain; the C1-C2 carbon chain of one or both of R₁ and R₂ is substituted and the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, and epoxy; the C1-C2 carbon chain of one or both of R₁ and R₂ is substituted and the substituants substituents are selected from the group consisting of: hydroxy, halogen, and amino; R₁ is a substituted C1 methyl; R₁ is a C1-C2 substituted or unsubstituted carbon chain; and R₂ is a C15-C19 substituted or unsubstituted carbon chain having a *cis* or *trans* double bond between the 9th and 10th carbons counting from the carbonyl (C=O) carbon and either: (i) a triple bond between the 12th and 13th carbons counting from the carbonyl (C=O) carbon or (ii) either a single or double bond between the 12th and 13th carbons and at least one substituent at one or both of the 12th and 13th carbons, wherein the substituants substituents are selected from the group consisting of hydroxy, oxo, halogen, amino, cyano, azido, cyclopropane, cyclopropene, epoxy and an unsubstituted C1-C2 carbon chain.

In other embodiments: the C1-C2 carbon chain of R₂ is substituted and the substituants substituents are selected from the group consisting of: hydroxy, oxo, halogen, amino, cyano, azido, and epoxy; the C1-C2 carbon chain of R₂ is substituted and the substituants substituents are selected from the group consisting of: hydroxy, oxo, halogen, azido, and amino; the C1-C2 carbon chain of R₂ is singly substituted; R₁ is H; R₁ is a cation (e.g., a fatty acid salt); R₂ is substituted only at one or both of 12th and 13th carbons counting from the carbonyl (C=O) carbon; R₂ is substituted only at the 12th carbon counting from the carbonyl (C=O) carbon; R₂ is substituted only at the 13th carbon counting from the carbonyl (C=O) carbon; with R₂ the substituants substituents are polar and are selected from the group consisting of: hydroxy, oxo, epoxy, halogen, amino, cyano and azido; within R₂ the substituants substituents are hydrogen bond acceptors and are selected from the group consisting of: hydroxy, oxo, epoxy, amino, cyano and azido; and within R₂ the substituants substituents are selected from the group consisting of: hydroxy, oxo and epoxy.

Please replace the paragraphs beginning at page 16, lines 25-34, with the following amended paragraphs:

R_1 = H, a cation or a C1-C5 substituted or unsubstituted carbon chain, wherein the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, epoxy and a substituted or unsubstituted C1-C2 carbon chain; and

R_2 = a C15-C19 substituted or unsubstituted carbon chain having a *cis* or *trans* double bond between the 9th and 10th carbons counting from the carbonyl (C=O) carbon and either: (i) a triple bond between the 12th and 13th carbons counting from the carbonyl (C=O) carbon or (ii) either a single or double bond between the 12th and 13th carbons and at least one substituant substituent at one or both of the 12th and 13th carbons, wherein the substituants substituents are selected from the group consisting of hydroxy, oxo, halogen, amino, cyano, azido, cyclopropane, cyclopropene, epoxy and a substituted or unsubstituted C1-C2 carbon chain.

Please replace the paragraphs beginning at page 17, lines 1-30, with the following amended paragraphs:

In various embodiments: R_1 is H or a cation; R_1 is a C1-C5 substituted or unsubstituted carbon chain, wherein the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, epoxy and a substituted or unsubstituted C1-C2 carbon chain; R_1 is a C1-C5 substituted or unsubstituted carbon chain, wherein the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, epoxy and an unsubstituted C1-C2 carbon chain; the C1-C2 carbon chain of one or both of R_1 and R_2 is substituted and the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, and epoxy; the C1-C2 carbon chain of one or both of R_1 and R_2 is substituted and the substituants substituents are selected from the group consisting of: hydroxy, halogen, and amino; R_1 is a substituted C1 methyl; R_1 is a C1-C2 substituted or unsubstituted carbon chain; and R_2 is a C15-C19 substituted or unsubstituted carbon chain having a *cis* or *trans* double bond between the 9th and 10th carbons counting from

the carbonyl (C=O) carbon and either: (i) a triple bond between the 12th and 13th carbons counting from the carbonyl (C=O) carbon or (ii) either a single or double bond between the 12th and 13th carbons and at least one substituent substituent at one or both of the 12th and 13th carbons, wherein the substituants substituents are selected from the group consisting of hydroxy, oxo, halogen, amino, cyano, azido, cyclopropane, cyclopropene, epoxy and an unsubstituted C1-C2 carbon chain.

In other embodiments: the C1-C2 carbon chain of R₂ is substituted and the substituants substituents are selected from the group consisting of: hydroxy, oxo, halogen, amino, cyano, azido, and epoxy; the C1-C2 carbon chain of R₂ is substituted and the substituants substituents are selected from the group consisting of: hydroxy, oxo, halogen, azido, and amino; the C1-C2 carbon chain of R₂ is singly substituted; R₁ is H; R₁ is a cation (e.g., a fatty acid salt); R₂ is substituted only at one or both of 12th and 13th carbons counting from the carbonyl (C=O) carbon; R₂ is substituted only at the 12th carbon counting from the carbonyl (C=O) carbon; R₂ is substituted only at the 13th carbon counting from the carbonyl (C=O) carbon; with R₂ the substituants substituents are polar and are selected from the group consisting of: hydroxy, oxo, epoxy, halogen, amino, cyano and azido; within R₂ the substituants substituents are hydrogen bond acceptors and are selected from the group consisting of: hydroxy, oxo, epoxy, amino, cyano and azido; and within R₂ the substituants substituents are selected from the group consisting of: hydroxy, oxo and epoxy.

Please replace the paragraphs beginning at page 19, line 6 thru page 20, line 14, with the following amended paragraphs:

R₁ = H, a cation (e.g., a fatty acid salt) or a C1-C5 substituted or unsubstituted carbon chain, wherein the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, epoxy and a substituted or unsubstituted C1-C2 carbon chain; and

R₂ = a C15-C19 substituted or unsubstituted carbon chain having a *cis* or *trans* double bond between the 9th and 10th carbons counting from the carbonyl (C=O) carbon and either: (i) a

triple bond between the 12th and 13th carbons counting from the carbonyl (C=O) carbon or (ii) either a single or double bond between the 12th and 13th carbons and at least one substituant substituent at one or both of the 12th and 13th carbons, wherein the substituants substituents are selected from the group consisting of hydroxy, oxo, halogen, amino, cyano, azido, cyclopropane, cyclopropene, epoxy and a substituted or unsubstituted C1-C2 carbon chain.

In various embodiments: the composition further comprises an aqueous surfactant, R₁ is H or a cation ; R₁ is a C1-C5 substituted or unsubstituted carbon chain, wherein the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, epoxy and a substituted or unsubstituted C1-C2 carbon chain; R₁ is a C1-C5 substituted or unsubstituted carbon chain, wherein the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, epoxy and an unsubstituted C1-C2 carbon chain; the C1-C2 carbon chain of one or both of R₁ and R₂ is substituted and the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, and epoxy; the C1-C2 carbon chain of one or both of R₁ and R₂ is substituted and the substituants substituents are selected from the group consisting of: hydroxy, halogen, and amino; R₁ is a substituted C1 methyl; R₁ is a C1-C2 substituted or unsubstituted carbon chain; and R₂ is a C15-C19 substituted or unsubstituted carbon chain having a *cis* or *trans* double bond between the 9th and 10th carbons counting from the carbonyl (C=O) carbon and either: (i) a triple bond between the 12th and 13th carbons counting from the carbonyl (C=O) carbon or (ii) either a single or double bond between the 12th and 13th carbons and at least one substituant substituent at one or both of the 12th and 13th carbons, wherein the substituants substituents are selected from the group consisting of hydroxy, oxo, halogen, amino, cyano, azido, cyclopropane, cyclopropene, epoxy and an unsubstituted C1-C2 carbon chain.

In other embodiments: the C1-C2 carbon chain of R₂ is substituted and the substituants substituents are selected from the group consisting of: hydroxy, oxo, halogen, amino, cyano, azido, and epoxy; the C1-C2 carbon chain of R₂ is substituted and the substituants substituents are selected from the group consisting of: hydroxy, oxo, halogen, azido, and amino; the C1-C2 carbon chain of R₂ is singly substituted; R₁ is H; R₁ is a cation; R₂ is substituted only at one or

both of 12th and 13th carbons counting from the carbonyl (C=O) carbon; R₂ is substituted only at the 12th carbon counting from the carbonyl (C=O) carbon; R₂ is substituted only at the 13th carbon counting from the carbonyl (C=O) carbon; with R₂ the substituants substituents are polar and are selected from the group consisting of: hydroxy, oxo, epoxy, halogen, amino, cyano and azido; within R₂ the substituants substituents are hydrogen bond acceptors and are selected from the group consisting of: hydroxy, oxo, epoxy, amino, cyano and azido; and within R₂ the substituants are selected from the group consisting of: hydroxy, oxo and epoxy.

Please replace the paragraphs beginning at page 21, line 18 thru page 22, line 22, with the following amended paragraphs:

R₁ = H, a cation or a C1-C5 substituted or unsubstituted carbon chain, wherein the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, epoxy and a substituted or unsubstituted C1-C2 carbon chain; and

R₂ = a C15-C19 substituted or unsubstituted carbon chain having a *cis* or *trans* double bond between the 9th and 10th carbons counting from the carbonyl (C=O) carbon and either: (i) a triple bond between the 12th and 13th carbons counting from the carbonyl (C=O) carbon or (ii) either a single or double bond between the 12th and 13th carbons and at least one substituant substituent at one or both of the 12th and 13th carbons, wherein the substituants substituents are selected from the group consisting of hydroxy, oxo, halogen, amino, cyano, azido, cyclopropane, cyclopropene, epoxy and a substituted or unsubstituted C1-C2 carbon chain.

In various embodiments: R₁ is H or a cation; R₁ is a C1-C5 substituted or unsubstituted carbon chain, wherein the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, epoxy and a substituted or unsubstituted C1-C2 carbon chain; R₁ is a C1-C5 substituted or unsubstituted carbon chain, wherein the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, epoxy and an unsubstituted C1-C2 carbon chain; the C1-C2 carbon chain of one or both of R₁ and R₂ is substituted and the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, and epoxy; the C1-C2 carbon chain of one or

both of R₁ and R₂ is substituted and the substituants substituents are selected from the group consisting of: hydroxy, halogen, and amino; R₁ is a substituted C1 methyl; R₁ is a C1-C2 substituted or unsubstituted carbon chain; and R₂ is a C15-C19 substituted or unsubstituted carbon chain having a *cis* or *trans* double bond between the 9th and 10th carbons counting from the carbonyl (C=O) carbon and either: (i) a triple bond between the 12th and 13th carbons counting from the carbonyl (C=O) carbon or (ii) either a single or double bond between the 12th and 13th carbons and at least one substituant substituent at one or both of the 12th and 13th carbons, wherein the substituants substituents are selected from the group consisting of hydroxy, oxo, halogen, amino, cyano, azido, cyclopropane, cyclopropene, epoxy and an unsubstituted C1-C2 carbon chain.

In other embodiments: the C1-C2 carbon chain of R₂ is substituted and the substituants substituents are selected from the group consisting of: hydroxy, oxo, halogen, amino, cyano, azido, and epoxy; the C1-C2 carbon chain of R₂ is substituted and the substituants substituents are selected from the group consisting of: hydroxy, oxo, halogen, azido, and amino; the C1-C2 carbon chain of R₂ is singly substituted; R₁ is H; R₁ is a cation (e.g., a fatty acid salt); R₂ is substituted only at one or both of 12th and 13th carbons counting from the carbonyl (C=O) carbon; R₂ is substituted only at the 12th carbon counting from the carbonyl (C=O) carbon; R₂ is substituted only at the 13th carbon counting from the carbonyl (C=O) carbon; with R₂ the substituants substituents are polar and are selected from the group consisting of: hydroxy, oxo, epoxy, halogen, amino, cyano and azido; within R₂ the substituants substituents are hydrogen bond acceptors and are selected from the group consisting of: hydroxy, oxo, epoxy, amino, cyano and azido; and within R₂ the substituants substituents are selected from the group consisting of: hydroxy, oxo and epoxy.

Please replace the paragraphs beginning at page 23, lines 17-26, with the following amended paragraphs:

R_1 = H, a cation or a C1-C5 substituted or unsubstituted carbon chain, wherein the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, epoxy and a substituted or unsubstituted C1-C2 carbon chain; and

R_2 = a C15-C19 substituted or unsubstituted carbon chain having a *cis* or *trans* double bond between the 9th and 10th carbons counting from the carbonyl (C=O) carbon and either: (i) a triple bond between the 12th and 13th carbons counting from the carbonyl (C=O) carbon or (ii) either a single or double bond between the 12th and 13th carbons and at least one substituant substituent at one or both of the 12th and 13th carbons, wherein the substituants substituents are selected from the group consisting of hydroxy, oxo, halogen, amino, cyano, azido, cyclopropane, cyclopropene, epoxy and a substituted or unsubstituted C1-C2 carbon chain.

Please replace the paragraphs beginning at page 24, lines 11-23, with the following amended paragraphs:

R_1 = H, a cation or a C1-C5 substituted or unsubstituted carbon chain, wherein the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, epoxy and a substituted or unsubstituted C1-C2 carbon chain;

R_3 = a C11 substituted or unsubstituted carbon chain having a *cis* double bond between the 9th and 10th carbons counting from the carbonyl (C=O) carbon, wherein the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy and a substituted or unsubstituted C1-C2 carbon chain;

R_4 = a C2-C6 substituted or unsubstituted carbon chain wherein the substituants substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, epoxy and a substituted or unsubstituted C1-C2 carbon chain;

X and Y are independently a substituted or unsubstituted methyl or S provided at least one or X and Y is S and wherein the substituants substituents on the methyl selected from the group consisting of: halogen, hydrogen, amino, and hydroxy.

Please replace the paragraphs beginning at page 25, lines 3-21, with the following amended paragraphs:

R_1 = H, a cation or a C1-C5 substituted or unsubstituted carbon chain, wherein the ~~substituants~~ substituents are selected from the group consisting of: hydroxy, halogen, amino, cyano, cyclopropane, epoxy and a substituted or unsubstituted C1-C2 carbon chain; and

R_2 = a C15-C19 substituted or unsubstituted carbon chain having a single bond between the 9th and 10th carbons counting from the carbonyl (C=O) carbon and either: (i) a triple bond between the 12th and 13th carbons counting from the carbonyl (C=O) carbon or (ii) either a single or double bond between the 12th and 13th carbons counting from the carbonyl (C=O) carbon and at least one ~~substituant~~ substituent at one or both of the 12th and 13th carbons, wherein the ~~substituants~~ substituents are selected from the group consisting of hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy and a substituted or unsubstituted C1-C2 carbon chain.

In various embodiments: the composition further comprises an aqueous surfactant; R_2 is a C15-C19 substituted or unsubstituted carbon chain having a single bond between the 9th and 10th carbons and a single bond between the 12th and 13th carbons counting from the carbonyl (C=O) carbon and at least one ~~substituant~~ substituent at one or both of the 12th and 13th carbons counting from the carbonyl (C=O) carbon, wherein the ~~substituants~~ substituents are selected from the group consisting of hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy and a substituted or unsubstituted C1-C2 carbon chain; the 12th and 13th carbons are substituted with an epoxy group; and 12th carbon is substituted with a hydroxy group.